

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION I  
JOHN F. KENNEDY FEDERAL BUILDING  
BOSTON, MASSACHUSETTS 02203-2211**

**FACT SHEET**

**DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES**

**PUBLIC NOTICE START AND END DATES:** APRIL 24, 2006 TO MAY 23, 2006

**PUBLIC NOTICE NUMBER:** NH-009-06

**CONTENTS:** 11 pages including Attachments A through C

**NPDES PERMIT NO.:** NH0022055

**NAME AND ADDRESS OF APPLICANT:**

EnviroSystems, Inc.  
P.O. Box 778  
Hampton, New Hampshire 03843-0778

**NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:**

EnviroSystems, Inc.  
One Lafayette Road  
Hampton, New Hampshire 03842

**RECEIVING WATERS:**

Taylor River - Channel (Hydrologic Unit Code: 01060003)

**CLASSIFICATION: B**

**I. Proposed Action, Type of Facility and Discharge Location.**

EnviroSystems, Inc. has applied to the U.S. Environmental Protection Agency for reissuance of an NPDES permit to discharge, via a multiport diffuser, into the Taylor River in Hampton, New Hampshire. The EnviroSystems, Inc. facility (ESI) provides acute and chronic exposure toxicity testing services to industrial, municipal and state agencies. Tests conducted include: acute assays with daphnids, fathead minnows, trout, sheepshead minnows, mysid shrimp and algae. Chronic exposure assays are tested with the same species plus sea urchins and macro algae. ESI cultures some of the test species used in its testing programs plus maintains facilities for acclimation and holding of test species purchased from outside sources. Discharges include culture flow through water, and wastewater from both static and flow-through exposure bioassays.

Although not specifically identified as a co-permittee, Aquatic Research Organisms, Inc. (ARO) shares the multiport diffuser (Outfall 002) with ESI. These discharges are authorized under

separate permits. The location of the facility, Outfall 002, and the receiving water are shown in Attachment A.

## **II. Description of Discharge.**

A quantitative description of significant effluent parameters based on ESI's reapplication data and discharge monitoring data (January 2002 through December 2004) is shown in Attachment B.

## **III. Limitations and Conditions.**

The draft permit contains limitations for flow, total suspended solids, pH, fecal coliform, total residual chlorine (when in use), and total ammonia as N. A reporting requirement is included for enterococci bacteria. Also, the facility is required to perform whole effluent toxicity testing (WET) that includes reporting for total recoverable metals (cadmium, copper, lead, nickel and zinc).

## **IV. Permit Basis**

### **A. Background**

The Clean Water Act (Act) prohibits the discharge of pollutants to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit unless such a discharge is otherwise authorized by the Act. The NPDES permit is the mechanism used to implement technology and water-quality based effluent limitations and other requirements including monitoring and reporting. The draft NPDES permit was developed in accordance with various statutory and regulatory requirements established pursuant to the Act and any applicable State administrative rules. The regulations governing EPA's NPDES permit program are generally found in 40 CFR Parts 122, 124, 125 and 136. Many of these regulations consist primarily of management requirements common to all permits.

EPA is required to consider technology and water quality-based requirements when developing permit limits. Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the ACT (See 40 CFR §125 Subpart A) to meet Best Practicable Control Technology Currently Available (BPT) for conventional pollutants and some metals, Best Conventional Pollution Control Technology (BCT) for conventional pollutants, and Best Available Technology Economically Achievable (BAT) for non-conventional and toxic pollutants. Technology guidelines (effluent limitations) for various industrial categories are found in 40 CFR §400-471, Subchapter N, Effluent Guidelines and Standards.

In the absence of published technology-based effluent guidelines, the permit writer is authorized under Section 402(a)(1)(B) of the ACT to establish effluent limitations on a case-by-case basis using Best Professional Judgement (BPJ).

In general, all statutory deadlines for meeting various technology-based guidelines (effluent limitations) established pursuant to the Act have expired. For instance, compliance with publicly owned treatment works (POTW) technology-based effluent limitations is, effectively, from date of permit issuance (40 CFR §125.3(a)(1)). Those for non-POTW technology-based effluent limitations must be complied with as expeditiously as practicable but in no case later than three years after the date such limitations are established and in no case later than March 31, 1989 (40

CFR §125.3(a)(2)). Compliance schedules and deadlines not in accordance with the statutory provisions of the Act cannot be authorized by a NPDES permit.

EPA regulations require NPDES permits to contain effluent limits more stringent than technology-based limits where more stringent limits are necessary to maintain or achieve state or federal water-quality standards. A water-quality standard consists of three elements: (1) beneficial designated use or uses for a waterbody or a segment of a waterbody; (2) a numeric or narrative water-quality criteria sufficient to protect the assigned designated use(s); and (3) an antidegradation requirement to ensure that once a use is attained it will not be eroded. Receiving water requirements are established according to numerical and narrative standards in the state's water quality standards adopted under state law for each stream classification.

The proposed draft permit attempts to limit any pollutant or pollutant parameter (conventional, non-conventional, toxic and whole effluent toxicity) that is or may be discharged at a level that causes or has "reasonable potential" to cause or contribute to an excursion above any water-quality criterion. An excursion occurs if the projected or actual in-stream concentration exceeds the applicable criterion outside of a mixing zone.

In determining reasonable potential, EPA considers: (1) existing controls on point and non-point sources of pollution; (2) pollutant concentration and variability in the effluent and receiving water as determined from permittee's reissuance application, Monthly Discharge Monitoring Reports (DMRs), and State and Federal Water Quality Reports; (3) sensitivity of the species to toxicity testing; (4) known water-quality impacts of processes on wastewaters; (5) statistical approach outlined in **Technical Support Document for Water Quality-based Toxics Control, March 1991, EPA/505/2-90-002** in Section 3; and, where appropriate, (6) dilution of the effluent in the receiving water. In accordance with State statutes and administrative rules [RSA 485-A:8, and Env-Ws 1705.02], available dilution for discharges to freshwater receiving waters is based on an estimated value of the 7 consecutive-day mean low flow at the 10-year recurrence interval (7Q10) for aquatic life or the mean annual flow for human health (carcinogens only) in the receiving water at the point of discharge. For discharges to marine/estuarine waters the available dilution is determined using hydrodynamic mixing zone modeling of a flow that is exceeded 99 percent of the time.

The draft permit may not be renewed, reissued, or modified with less stringent limitations or conditions than those conditions in the previous permit unless in compliance with the anti-backsliding requirement of the Act [See Sections 402(o) and 303(d)(4) of the ACT and 40 CFR §122.44(l)(1 and 2)]. EPA's antibacksliding provisions prohibit the relaxation of permit limits, standards, and conditions unless certain conditions are met. Therefore, unless those conditions are met the limits in the reissued permit must be at least as stringent as those in the previous permit.

In addition, the draft permit must conform to the conditions established pursuant to a State Certification under Section 401 of the Act that meet the requirements of 40 CFR §124.53 and §124.55. EPA regulations pertaining to permit limits based upon water-quality standards and state requirements are contained in 40 CFR §122.44(d).

The conditions of the draft permit reflect the goal of the CWA and EPA to achieve and then to maintain water quality standards. To protect the existing quality of the State's receiving waters, the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) adopted Antidegradation requirements in their September 30, 1996 Surface Water Quality Regulations (Env-Ws 1708).

ESI and Aquatic Research Organisms, Inc. (ARO) historically were two divisions under Millipore of New Hampshire. After Millipore's sale of the divisions, ARO and ESI were established as individual companies and EPA-New England issued permits NH0022055 to ESI and NH0022985 to ARO. These permits reflect each applicant's discharge, even though these two facilities share a common outfall pipe (002).

The combined salt and fresh water flows through this facility are shown in Attachment B. The existing permit indicates that provisions are available for disinfection of the culture water (outfall 002) with chlorine. The draft permit contains average monthly and maximum daily limits of 0.75 and 1.0 milligrams per liter when chlorine is in use at the facility.

ESI is not considered a concentrated aquatic animal production facility according to the definition given in 40 CFR 122.24. No national effluent limitation guidelines have been promulgated that cover a discharge of this type.

## **B. Flow and Conventional Pollutants**

### **Flow**

The maximum daily flows reported for the ESI outfall in the most recent permit reapplication is 4,000 gpd. Therefore, the draft permit contains 4,000 gpd as the maximum daily flow limit established to represent the current and future operations at this facility.

### **TSS, Bacteria and pH**

#### **TSS**

The existing permit includes a maximum daily limit of 50 mg/l for total suspended solids and requires weekly monitoring. Over the 2 year period of January 2003 - December 2004 of the existing permit, TSS concentrations have ranged from 2.4 mg/l to 27 mg/l with an average of 7.1 mg/l (see Attachment C). Weekly monitoring and a maximum daily limit of 50 mg/l has been retained in the draft permit. The limit is based on BPJ authority as discussed above and the existing permit. This maximum daily limit is intended to protect the Taylor River from TSS concentrations that could form objectionable benthic deposits in the vicinity of the discharge. The once per week monitoring frequency varies from the **EPA/NHDES Effluent Monitoring Guidance** implemented in March 1993 and revised in July 1999, which requires twice per week (2/week) monitoring. Less frequent sampling is appropriate because wastewater generated during the cleaning of the culture tanks is directed to an on site septic system. These frequencies are minimum requirements needed to assess the process variability to properly evaluate compliance with NPDES permitted limits. TSS and all other samples must be collected by ESI at a location prior to mixing with the discharge from ARO.

#### **Bacteria**

New Hampshire State statute N.H. RSA 485-A:8,V. specifies that the bacteria standard shall be "...as recommended under the National Shellfish Program Manual of Operation, United States Department of Food and Drug Administration." This standard applies to facilities which discharge into tidal waters used for growing or taking of shellfish for human consumption, and therefore applies to ESI. The criteria for fecal coliform bacteria is 14 colonies per 100 milliliters of fecal coliform bacteria and includes a condition that not more than 10 percent of the samples

exceed a Most Probable Number (MPN) of 43 colonies per 100 milliliters for a 5-tube decimal dilution test.

N.H. RSA 485-A:8,V. also requires enterococci bacteria limits for discharges to "tidal waters utilized for swimming purposes." The recommended criteria for enterococci bacteria is that the water should contain "... not more than either a geometric mean based on at least 3 samples obtained over a 60-day period of 35 enterococci per 100 milliliters or 104 enterococci per 100 milliliters in any one sample unless naturally occurring."

The draft permit includes compliance monitoring frequency for fecal coliform five times per week (5/week), and two times per week (2/week) for enterococci bacteria. Historic data (1993) collected of the facility's influent and subsequent effluent showed that concentrations of enterococci bacteria increased somewhat from influent to effluent. Therefore there is reason to believe that enterococci are present in the facility's effluent and this draft permit includes a reduced monitoring frequency and only a reporting requirement in lieu of limits since there is no obvious swimming area at the outfall or immediately downstream from the outfall.

The permit also contains a state permit condition to notify the New Hampshire Department of Environmental Services, Watershed Management Bureau, Shellfish Section whenever there is an upset or bypass of the disinfection system.

## **pH**

NHDES requires that pH limits be satisfied at end-of-pipe with no allowance for dilution. The limit for pH is based upon State Certification Requirements and RSA 485-A:8.I. which states that "The pH range for said (Class B) waters shall be 6.5 to 8.0 except when due to natural causes. The draft permit limits for pH are the same as the limits in the existing permit for the culture water (outfall 002). If the applicant can demonstrate (see Part I.E.1.a. of the draft Permit) to the satisfaction of NHDES-WD that the in-stream standard will be protected when the discharge is outside of the permitted range, then the applicant or NHDES-WD may request (in writing) that the permit limits be modified by EPA to incorporate the results of the demonstration. EPA will notify the permittee and the NHDES-WD if it concurs with the results.

On January 31, 2002, ESI requested that the NHDES requested allow the upper range of the pH limit to be raised to 8.25 S.U.. NHDES approved this request on March 4, 2002. In a letter dated March 15, 2002, ESI requested that the EPA modified the permit to include the revised upper pH limit. EPA contacted ESI on March 26, 2002 to notify them that the upper pH limit could be raised to 8.25 S.U. and it was agreed to in this conversation that the upper pH limit would be revised during permit reissuance. Therefore, the pH range for draft permit is 6.5 - 8.25 S.U..

The compliance monitoring frequency for pH is daily, the same as in the existing permit. Again, this frequency conforms to the EPA/NHDES Effluent Monitoring Guidance described above. The analytical method for pH requires that the sample type be a grab.

## **C. Available Dilution and Nonconventional and Toxic Pollutants**

Water quality based limits for specific pollutants such as chlorine or metals are determined from chemical specific numeric criteria derived from extensive scientific studies. The specific toxic pollutants and their associated toxicity criteria are known as the "Gold Book Criteria" which EPA published in **Quality Criteria for Water, 1986, (EPA 440/5-86-001 as amended)**. The State of New Hampshire adopted these "Gold Book Criteria" with certain exceptions, and included them as

part of the NH Standards. EPA uses these pollutant specific criteria and available dilution in the receiving water to determine a specific pollutant's draft permit limit.

### **Available Dilution**

Available dilution in the receiving water for outfall 002, as discussed in the existing permit, was determined to be:

- 97.9 (maximum daily flow); and
- 100 (monthly average flow).

Outfall 002 is a multiport diffuser located on the river bottom near the middle of the tidal Taylor River. The diffuser was designed using the Cornell Mixing Zone Expert System (CORMIX), to account for re-entrainment of a previously discharged plume such as that which occurs in tidally reversing rivers.

The worst case acute and chronic dilutions predicted by CORMIX occurred 15 minutes after the spring low tide. The multiport diffuser outfall supports both ESI and the discharge permitted under NPDES permit number NH0022985 (Aquatic Research Organisms, Inc. (ARO)). The modeling for the diffuser was performed using a flow of 14,000 gallons/day which is equal to the combined flow from ESI and ARO.

At maximum daily combined flows from ESI and ARO, the centerline of the plume was shown to be 26.2 feet (7.99 meters) downstream from the outfall. The plume width was shown to be 40 feet (12.2 meters) and had not contacted the shore. The plume thickness was shown to be 0.98 feet (0.30 meters).

At the monthly average combined flows from ESI and ARO, the centerline of the plume was shown to be 30.4 feet (9.26 meters) downstream from the diffuser outfall. The plume width was shown to be 40 feet (12.2 meters) and had not contacted the shore. The plume thickness was shown to be 0.98 feet (0.30 meters). The dilution factor was shown to be 128.7, but because the NHDES policy allows mixing zones only up to a maximum dilution of 100, the dilution factor becomes 100.

Outfall diffusers are mechanical structures that will require periodic maintenance. If they are not working as designed, the available dilution upon which permit limitations are based may not be achieved. Further, the reasonable potential calculations that are used to determine if a permit limit is necessary may be in error. Either of these situations could lead to violations of the NH standards. Accordingly, NHDES and EPA-New England have included a permit condition that requires periodic inspections and any necessary maintenance of the diffuser pursuant to 40CFR122.41(3), "*Proper operation and maintenance*".

### **Total Residual Chlorine**

Total Residual Chlorine (chlorine or TRC) is limited in outfall 002 since it is reported in ESI's permit reapplication that "provisions are available for chlorine disinfection." Since chlorine is not used continuously, however, the permit requires monitoring only when chlorine is being used. Since chlorine may be used in this outfall and since no provisions are available for dechlorination there is reasonable potential that New Hampshire's water quality standards for chlorine would be violated.

The monthly average numeric limitation included in the draft permit was derived using the

monthly average dilution factor of 100 and the chronic marine water quality standard for chlorine. The maximum daily limitation of 1.0 is the same as in the existing permit and was derived using Best Professional Judgement (BPJ) under the authority granted in Section 402(a)(1) of the Act and 40 CFR 125.3. This is consistent with antibacksliding regulations.

The compliance monitoring frequency for outfall 001 for chlorine included in the draft permit is twice per day (2/day) but only when it is in use. Again, this frequency is consistent with the EPA/NHDES Effluent Monitoring Guidance described above. The analytical method for chlorine requires that the sample type be a grab.

### **Hydrogen Sulfide**

A hydrogen sulfide monitoring requirement was included in the existing permit to determine if there was reasonable potential that the chronic marine water quality standard would be violated. Facility data show that hydrogen sulfide concentrations in the effluent were consistently below detection limits. Therefore, the monitoring requirement for hydrogen sulfide has not been carried forward into this draft permit.

### **Ammonia**

The existing permit includes a limit for ammonia (as ammonia) of 21.0 mg/L. This marine criteria is a function of temperature, pH and salinity and the values of 24 C, 8.6 s.u. and 10 parts per thousand (ppt) were used, respectively. These values were based on the past permit application from the neighboring ARO for saltwater intake samples and ambient salinity data collected by NHDES for use in hydrodynamic mixing zone modeling. The monthly average limit of 21 mg/l is in accordance with New Hampshire Env-Ws 1703.26, and accounts for the dilution factor of 100. A maximum daily reporting requirement is also included in the draft permit for outfall 002. The compliance monitoring frequency for ammonia in outfall 002 is twice per week (2/week). This frequency is consistent with that contained in the EPA/NHDES Effluent Monitoring Guidance. The analytical method for ammonia requires that the sample type be a grab.

### **D. Whole Effluent Toxicity**

EPA's recently published **Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991**, recommends using an "integrated strategy" containing both pollutant (chemical) specific approaches and whole effluent (biological) toxicity approaches to control toxic pollutants in effluent discharges from entering the nation's waterways. EPA New England adopted this "integrated strategy" on July 1, 1991, for use in permit development and issuance. These approaches are designed to protect aquatic life and human health. Pollutant specific approaches such as those in the Gold Book and State regulations address individual chemicals, whereas, whole effluent toxicity (WET) approaches evaluate interactions between pollutants thus rendering an "overall" or "aggregate" toxicity assessment of the effluent. Furthermore, WET measures the "Additivity" and/or "Antagonistic" effects of individual chemical pollutants which pollutant specific approaches do not, thus the need for both approaches. In addition, the presence of an unknown toxic pollutant can be discovered and addressed through this process.

Section 101(a)(3) of the ACT specifically prohibits the discharge of toxic pollutants in toxic amounts and State law N.H. RSA 485-A:8, VI and the N.H. Code of Administrative Rules, PART Env-Ws 432.02(c)(4) states that, "all classes of waters shall be free from toxic pollutants or chemical constituents in concentrations or combination that injure or are inimical to plants, animals,

humans, or aquatic life;". NPDES regulations under 40 CFR §122.44(d)(1)(v) require WET limits in a permit when a discharge has a "reasonable potential" to cause or contribute to an excursion above the State's narrative criterion for toxicity.

A review of the toxicity testing data from January 2003 to December 2004 shows that ESI has successfully passed all but one toxicity test. The draft permit requires quarterly testing, and includes an acute limit of LC50 = 100 percent, the same as in the existing permit. This requirement does not violate the antibacksliding regulations.

Because the facility cultures aquatic fish and invertebrate species, EPA believes a mortality in these species provide additional toxicity information on the facilities discharge for those cultures tied directly to the effluent. Accordingly, the draft permit proposes a specific notification requirement following a water quality induced mortality greater than 25 percent in any aquatic fish and invertebrate species under culture at the facility. This requirement applies only to the cultures that are directly connected to the discharge. The standard notification requirements in Part II would apply.

## **E. Essential Fish Habitat and Endangered Species**

### **Essential Fish Habitat**

The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104267), established a new requirement to describe and identify (designate) "essential fish habitat" (EFH) in each federal fishery management plan. Only species managed under a federal fishery management plan are covered. Fishery Management Councils determine which areas will be designated as EFH. The Councils have prepared written descriptions and maps of EFH, and include them in fishery management plans or their amendments. EFH designations for New England were approved by the Secretary of Commerce on March 3, 1999.

The 1996 Sustainable Fisheries Act broadly defined essential fish habitat as "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Waters include aquatic areas and their associated physical, chemical, and biological properties. Substrate includes sediment, hard bottom, and structures underlying the waters. Necessary means the habitat required to support a sustainable fishery and the managed species contribution to a healthy ecosystem. Spawning, breeding, feeding, or growth to maturity covers all habitat types utilized by a species throughout its life cycle. Adversely affect means any impact which reduces the quality and/or quantity of EFH. Adverse effects may include direct (i.e. contamination, physical disruption), indirect (i.e. loss of prey), site specific or habitat wide impacts including individual, cumulative, or synergistic consequences of actions.

According to the Guide to Essential Fish Habitat Designations in the Northeastern United States; Volume 1: Maine and New Hampshire (March 1999), EFH has been designated for the following species associated with the Taylor River.



Species	Eggs	Larvac	Juveniles	Adults
Atlantic cod ( <i>Gadus morhua</i> )	X	X	X	X
haddock ( <i>Melanogrammus aeglefinus</i> )			X	
pollack ( <i>Pollachius virens</i> )			X	
whiting ( <i>Merluccius bilinearis</i> )	X	X	X	X
red hake ( <i>Urophycis chuss</i> )	X	X	X	X
redfish ( <i>Sebastes fasciatus</i> )	n/a	X	X	X
winter flounder ( <i>Pleuronectes americanus</i> )	X	X	X	X
yellowtail flounder ( <i>Pleuronectes ferruginea</i> )			X	X
windowpane flounder ( <i>Scopthalmus aquosus</i> )			X	X
American plaice ( <i>Hippoglossoides platessoides</i> )			X	X
ocean pout ( <i>Macrozoarces americanus</i> )	X	X	X	X
Atlantic halibut ( <i>Hippoglossus hippoglossus</i> )	X	X	X	X
Atlantic sea scallop ( <i>Placopecten magellanicus</i> )	X	X	X	X
Atlantic sea herring ( <i>Clupea harengus</i> )			X	X
monkfish ( <i>Lophius americanus</i> )	X	X	X	X
long finned squid ( <i>Loligo pealei</i> )	n/a	n/a	X	X
short finned squid ( <i>Illex illecebrosus</i> )	n/a	n/a	X	X
Atlantic butterfish ( <i>Peprilus triacanthus</i> )	X	X	X	X
Atlantic mackerel ( <i>Scomber scombrus</i> )	X	X	X	X
summer flounder ( <i>Paralichthys dentatus</i> )				X
scup ( <i>Stenotomus chrysops</i> )	n/a	n/a	X	X
black sea bass ( <i>Centropristus striata</i> )	n/a			
surf clam ( <i>Spisula solidissima</i> )	n/a	n/a	X	X
ocean quahog ( <i>Artica islandica</i> )	n/a	n/a		
spiny dogfish ( <i>Squalus acanthias</i> )	n/a	n/a		
bluefin tuna ( <i>Thunnus thynnus</i> )				X

The notation "n/a" indicates some of the species either have not data available on the designated lifestages, or those lifestages are not present in the species' reproductive cycle.

The conditions, limitations, and monitoring requirements contained in this draft permit are designed to be protective of all aquatic species in the Taylor River. Accordingly, it is EPA's opinion that adverse impacts to EFH for the species listed above have been minimized to the extent that they are negligible and that no additional mitigation is warranted. If adverse affects to EFH do occur as a result of this permit action, or if new information changes the basis for this conclusion, then NMFS will be notified and consultation will be reinitiated.

## Endangered Species

The Endangered Species Act (16 U.S.C. 1451 et seq), Section 7, requires the EPA to ensure, in consultation with the U.S. Fish and Wildlife Service (USFWS) and/or NMFS, as appropriate, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species, or adversely affect its critical habitat.

USFWS and NMFS were both contacted to determine whether or not threatened or endangered species are present in the Taylor River. Both services stated that there are no listed species present.

## **V. Additional Requirements and Conditions**

The effluent monitoring requirements in the draft permit have been established to yield data representative of the discharge under the authority of Section 308(a) of the ACT in accordance with 40 CFR §122.41(j), §122.44(i) and §122.48.

The remaining conditions of the permit are based on the NPDES regulations 40 CFR, Parts 122 through 125, and consist primarily of management requirements common to all permits.

## **VI. State Certification Requirements.**

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving water(s) either certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards or waives its right to certify as set forth in 40 CFR §124.53. The only exception to this is that sludge conditions/requirements are not part of the Section 401 State Certification. The staff of the New Hampshire Department of Environmental Services, Water Division (certifying authority), has reviewed the draft permit and advised EPA that the limitations are adequate to protect water quality. EPA has requested permit certification by the State and expects that the draft permit will be certified. Regulations governing state certification are set forth in 40 CFR §124.53 and §124.55.

## **VII. Comment Period, Hearing Requests, and Procedures for Final Decisions.**

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the U.S. EPA, Office of Ecosystem Protection, New Hampshire State Program Unit, Mail Code CNH, J.F.K. Federal Building, Boston, Massachusetts 02203-0001. Any person, prior to such date, may submit a request in writing for a public hearing to consider the draft permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty (30) days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit, the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston office. Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the final permit decision, any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the Requirements of 40 CFR §124.74.

### VIII. EPA/State Contacts.

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m. (8:00 a.m. and 4:00 p.m. for the state), Monday through Friday, excluding holidays from:

Dan Arsenault  
U.S. Environmental Protection Agency  
Suite 1100 (Mail Code: CMP)  
One Congress Street  
Boston, Massachusetts 02114-2023  
Telephone No.: (617)918-1562  
FAX No.: (617) 918-1505

or

Ms. Susan A. Willoughby, P.E.  
New Hampshire Department of Environmental Services  
Water Division  
Wastewater Engineering Bureau  
P.O. Box 95  
Concord, New Hampshire 03302-0095  
Telephone No.: (603) 271-3307  
FAX No.: (603) 271-4128

4/11/06

Date

Linda M. Murphy, Director  
Office of Ecosystem Protection  
U.S. Environmental Protection Agency

**ATTACHMENT A**  
**OUTFALL LOCATION MAP**



Photo taken 4/11/98 and obtained through [www.terraserver.microsoft.com](http://www.terraserver.microsoft.com).

## ATTACHMENT B

### CONCENTRATIONS OF EFFLUENT CHARACTERISTICS AT OUTFALL 002

The following effluent characteristics were derived from analysis of discharge monitoring data collected from Outfall 002 from January 2002 through December 2004. All these data were extracted from the monthly discharge monitoring reports submitted by EnviroSystems, Inc.. These effluent values characterize culture flow through effluent discharged from this facility.

Effluent Characteristic	Average of Average Monthly	Range of Average Monthly	Range of Maximum Daily
Flow (gallons per day)	394.25	67 - 996	242 - 2569
TSS (mg/L)	7.1	2.4 - 27.0	5.6 - 95.2
pH (s.u.)	-----	-----	7.14 - 8.24
Total Residual Chlorine	None used	None used	None used
Hydrogen Sulfide	-----	-----	<0.10 - <0.10
Fecal Coliform (cts/100 mL)	8.62	0 - 140	2.0 - 2980.0
Ammonia Nitrogen as N	0.20	0.02 - 0.40	0.16 - 2.40

Range of Whole Effluent Toxicity Results: (LC50 in %) and (A-NOEC in %)	
<i>Americamysis bahia</i>	(96 - 100) and (100 - 100)
<i>Menidia beryllina</i>	(100-100) and (100-100)

**ATTACHMENT C**  
**WATER QUALITY BASED LIMIT**

Equation used to calculate monthly average and maximum daily Total Residual Chlorine limit where:

$$\text{Chlorine Limit} = \text{Dilution Factor} \times \text{Water Quality Standard}$$

Marine water quality standards for chlorine are:

- 0.0075 = Chronic Water Quality Standard for Chlorine, in mg/l.
- 0.013 = Acute Water Quality Standard for Chlorine, in mg/l.

Dilution factors are 97.9 and 100 for Acute and Chronic respectively.